IN THE CLAIMS:

Please amend claims 1, 4-11, 13, and 15-18; cancel claims 2, 12, 19, and 20; and add new claims 21-28 as follows:

1. (Amended)   An automated calibration system to track a selected object through a series of frames of data, comprising:

a display device to display at least one image frame received from an image input device, wherein the image frame includes a calibration window;

an image selection device to select, via the calibration window, the selected object in the at least one image frame;

an image source device to provide a hue saturation value (HSV) data array of pixels forming the at least one image frame; and

an analysis module to determine analysis data for pixels within the calibration window, based on the HSV data array, and determine test analysis data for a set of adjacent test windows, each of the adjacent test windows having a same shape as the calibration window, wherein tracking data, to track the selected object, is selected from one of the calibration window and the adjacent test windows having a highest tracking probability.

4. (Amended)   The system of claim 1, wherein the image source device and the analysis module are part of a single device.

5. (Amended)   The system of claim 1, wherein the analysis module calculates a mean hue and a standard deviation of a hue of the pixels representing the colored object.

6. (Amended)   The system of claim 5, wherein if at least one of the mean

hue and the standard deviation of the hue is less than predetermined levels, the colored object is not tracked.

7.   (Amended)   The system of claim 1, wherein the analysis module calculates a mean saturation and a standard deviation of a saturation of the pixels representing the selected object.

8.   (Amended)   The system of claim 7, wherein if at least one of the mean saturation and the standard deviation of the saturation is less than predetermined levels, the selected object is not tracked.

9.   (Amended)   A method of calibrating a computer-vision system to track a selected object through a series of frames of data, comprising:

displaying at least one image frame from an image input device, wherein the image frame includes a calibration window;

providing an image selection device to select the selected object, via the calibration window, from the at least one image frame;

determining a hue saturation value (HSV) data array of pixels forming the at least one image frame;

determining analysis data for pixels within the calibration window based on the HSV data array; and

determining test analysis data for a set of adjacent test windows, each of the adjacent test windows having a same shape as the calibration window, wherein tracking data, to track the selected object, is selected from the one of the calibration window and the adjacent test windows having a highest tracking probability.

10.   (Amended)   The method of claim 9, wherein the method further includes

converting a pixel data array for the at least one image frame from a red-green-blue

colorspace (RGB) data array to the HSV data array.

11. (Amended) The method of claim 28, further including applying the pixel

data from an entire frame to the pixel-classification look-up map, wherein if the amount

of the pixels associated with the object is greater a predetermined amount, the

calibration method restarts.

13. (Amended) The method of claim 10, wherein the method further

includes thresholding the HSV data array of pixels and disregarding pixel data for each

of the pixels having a product of a saturation coordinate and a value coordinate below

a predetermined threshold amount.

15. (Amended) The method of claim 14, wherein the method includes

restarting the calibration method if at least one of the mean hue and the standard

deviation of the hue is less than predetermined levels.

16. (Amended) The method of claim 10, wherein the method further

calculating a mean saturation and a standard deviation of a saturation of the pixels in

the selected object.

17. (Amended) The method of claim 16, wherein the method includes

restarting the calibration method if the mean saturation or the standard deviation of the

saturation are less than predetermined levels.

18. (Amended) The method of claim 10, wherein the method further

includes allowing the user to select the selected object.

21. (New) The system of claim 1, wherein the analysis module further

includes a thresholding module to disregard pixel data for each of the pixels having a

product of a saturation coordinate and a value coordinate below a predetermined threshold amount.

22.   (New) The system of claim 1, wherein the calibration window is smaller than the at least one image frame.

23.   (New) The system of claim 1, wherein each of the adjacent test windows have a same size as the calibration window.

24.   (New) The system of claim 1, wherein each of the adjacent test windows have at least one pixel overlapping with the calibration window.

25.   (New) The method of claim 9, wherein the calibration window is smaller than the at least one image frame.

26.   (New) The method of claim 9, wherein each of the adjacent test windows has a same size as the calibration window.

27.   (New) The method of claim 9, wherein each of the adjacent test windows have at least one pixel overlapping with the calibration window.

28.   (New) The method according to claim 9, wherein the method further includes creating a pixel-classification look-up map for the HSV data array of pixels.

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